Mr. David Keith
Project Coordinator
Anchor QEA, LLC
614 Magnolia Avenue
Ocean Springs, MS 39654

RE: Draft Feasibility Study Report
San Jacinto River Waste Pits Superfund Site, Harris County, Texas
Unilateral Administrative Order, CERCLA Docket No. 06-03-10

Dear Mr. Keith:

The Environmental Protection Agency (EPA) and other agencies have performed reviews of the above referenced document dated August 2013. The enclosed comments shall be incorporated in the Final Remedial Investigation Report and copies provided for review and approval in accordance with the approved schedule.

If you have any questions, please contact me at (214) 665-8318, or send an e-mail message to miller.garyg@epa.gov.

Sincerely yours,

Gary Miller
Remediation Project Manager

Enclosure

cc: Steve Ellis (TCEQ)
Bob Allen (Harris County)
Linda Henry (Port of Houston)
Jane Sarosdy (TGLO)

9494982

Comments
Draft Feasibility Study (FS) Report dated August 2013

1. (General): A detailed discussion of all problems noted with the TCRA cap and corrective actions performed to date shall be included in the FS Report.

2. (General): Statements regarding a recommended or preferred remedial alternative shall be deleted from the FS. The EPA will select the final remedial action for the site in the Record of Decision.

3. (General): The monthly site reports note that there are potential impacts from San Jacinto River Fleet's operations such as suspending sediments in the area. The FS shall note that the Remedial Design will include provisions for re-sampling the sediment area(s) that exceed the final sediment remediation goal to confirm the depth of the exceedences.

4. (General): The FS only considers institutional controls for the Southern Impoundment area. The FS shall include a range of alternatives for this area similar to the range of alternatives in

5. (General): No costs are included for institutional controls. The FS shall include these costs as appropriate.

6. (General): The FS shall clarify if dewatering costs and effluent disposal costs have been considered while developing the cost estimates for Alternatives 5 and 6.

7. (General): The FS shall clarify in the detailed analysis if USACE permits or other relevant permits are applicable to the implementation of the alternatives while addressing the submerged areas.

8. (General): Please clarify why costs for five year reviews and present value analysis have not been included for each of the Alternatives. Please clarify if any periodic costs have been considered for the maintenance of institutional controls in each of the Alternatives.

9. (General): The FS shall consider as an ARAR the Toxic Substances Control Act (TSCA) governing transport, handling, and disposal of PCB-contaminated sediment or residues.

10. (General): The cost estimating tables in Appendix C of the FS shall include specific line items for establishing and monitoring institutional controls (for each alternative where ICs are included).

11. (General): The design approaches noted for the containment alternatives shall be in accordance with the U.S. Army Corps of Engineers recommendations developed in reference to the previous erosion of the TCRA cap, and revisions to the alternative descriptions and cost estimates shall be reflected in the FS Report.

12. (General): Worker safety concerns are discussed in the FS. It is noted that Alternatives 4, 5, and 6 include increased probabilities of non-fatal and fatal injuries compared to the other alternatives. The FS shall also state that all worker safety concerns will be appropriately addressed in the Remedial Design phase of the project with detailed health and safety plans. Complex remedial actions at other Superfund sites and including the TCRA implementation at the site have documented that safety concerns can and should be appropriately addressed.

13. (General): The FS estimates the impacts of greenhouse gas, particulate matter, and ozone emissions. The FS notes that Alternatives 4, 5, and 6 will result in increased emissions compared to the other alternatives. The FS shall also discuss the industrial/ commercial nature of the immediate site area, the presence of highly trafficked transportation corridors (1-10), and ambient air quality that exists, and discuss and support the incremental significance of any air emissions associated with the treatment/removal alternatives.

14. (General): The FS has no discussion of floodplain management and impact considerations of construction in the floodplain and floodwater pathways and how that would impact flood control, river pathway and water flow issues and obstructions in navigable waters. The FS shall include a discussion of these issues. In addition, the FS shall clarify in the detailed analysis if USACE permits or other relevant permits are applicable to the implementation of the alternatives while addressing the submerged areas.

15. (General): The FS shall include costs for five year reviews, and shall describe the assumptions used for the present value analysis, including discount rate, for each of the Alternatives. The EPA requires that present value analysis use a discount rate of 7%.

16. (General): The computer model application to the Site makes numerous assumptions and simplifications. Although many of the assumptions are typical of other model development efforts, the uncertainties these assumptions introduce into the model application in the FS were generally not clearly identified or assessed. Uncertainties that may impair the model's ability to evaluate FS alternatives shall be clearly identified and assessed, including the following:

a. Representation of upstream boundary conditions, particularly sediment loads at the Lake Houston Dam. Figure 4-15 of the Fate and Transport Study suggests that suspended sediment concentrations (SSC) at any flow rate range by a factor of 2 at the low end of the flow spectrum to nearly a factor of 100 at moderate to high flow rates. Given the nearly two orders of magnitude variation in SSCs at typical river flow rates, it is unclear what basis was used to conclude that examining a factor of 2 in upstream load estimates provides a "quantitative evaluation" of uncertainty. The FS shall clarify this.
b. Simulation of sediment transport and the representation of hard bottom areas along the river channel downstream of Lake Houston.
c. Oversimplification of processes, particularly the failure to account for the influence that salinity differences is expected to have on fine sediment deposition.
d. Representation of model initial bed properties such as grain size distributions.
e. Simulation of net sediment transport within the Preliminary Site Perimeter.

f. Application of the model at spatial and temporal scales finer than the scales over which model performance is reliable.

17. (Section: Executive Summary, p. ES-2): The FS states that Alternatives 1, 2, and 3 provide greater long term effectiveness than Alternatives 4, 5, and 6. This statement shall be deleted. Alternatives 1, 2, and 3 do not include any reduction of volume or mobility, nor any treatment or removal/disposal, as do Alternatives 4, 5, and 6. Treatment and removal remedies have been successfully designed, implemented, and monitored /maintained to ensure remedial action objectives are met at Superfund sites across the U.S.

18. (Section: Executive Summary, p. ES-3): Statements that there are no increased long-term benefits for Alternatives 4, 5, and 6 shall be deleted. As noted in the previous comment, these alternatives result in a reduction of volume or mobility, and include treatment or removal/disposal, which are important considerations for long-term permanence. Treatment or removal/disposal provides additional long-term protectiveness benefits compared to not doing treatment or removal/disposal. Similarly, statements that Alternatives 4, 5, and 6 provide less environmental benefit and reduction of risk shall be deleted. It is noted that the relative potential of the various alternatives for releasing contaminated material is an important issue and will be assessed as a part of the remedy selection process.

19. (Section: Executive Summary, p. ES-3): This section describes the drawbacks to Alternatives 4, 5, and 6, but does not discuss their benefits. The purpose of a FS is to evaluate the pros and cons of the alternatives so that their relative merits can be weighted and the best overall alternative can be selected based on the nine CERCLA criteria. This section shall also include a discussion of the merits of Alternatives 4, 5, and 6 (treatment, removal, long term protectiveness, etc.).

20. (Section: Executive Summary, p. ES-3): This section mentions the greater implementation uncertainty for Alternatives 4, 5, and 6. Containment, treatment, and removal remedies have been successfully designed and constructed at many sediment sites in the U.S. Higher uncertainties during implementation are inherent in more robust remedies; however, proper design should account for this. The uncertainty discussion shall be modified to also note the technologies' successful application with proper design.

21. (Section 5.1.2, p. 48): The text states that 3 cap maintenance events are included for Alternative 1, but the cost table lists 6 cap maintenance events. The FS shall clarify the estimated number of cap maintenance events.

22. (Section 5.2.2, p. 51): The text states that 3 cap maintenance events are included for Alternative 2, but the cost table lists 6 cap maintenance events. The FS shall clarify the estimated number of cap maintenance events.

23. (Section 5.4, p. 54): As per Section 2.4.1 of the FS, salinity ranges in the River from 2 to 20 parts per thousand. The FS shall clarify what stabilizing agents will be considered for Alternative 4, and shall provide for the possible performance of a treatability study and include the costs.

24. (Section 5.4.2, p. 56): This section includes several statements regarding the effectiveness of solidification/stabilization (S/S) treatments. For example, it "may reduce the potential mobility of soil/sediment exceeding PCLs using S/S treatment; however, those wastes are already adequately contained within the TCRA cap"; also, it "would provide marginal additional enhancement of the reliability of the containment"; and "the material that would be stabilized is already currently immobilized by the TCRA cap." The FS shall be revised to state that the S/S treatment will provide additional long term effectiveness compared to containment alone and will enhance the ability of the most highly contaminated material to withstand major flood events. The FS shall also note that, while a 100-year storm event is the usual design approach, it cannot be guaranteed that a storm event of even greater magnitude would never occur. Finally, the FS shall include a discussion about the preference for treatment, which will not be included in Alternatives 1, 2, or 3, but is a component of Alternative 4.